Curriculum Development Handbook

2011-2012

Introduction

The purpose of this guide is to provide guidance to content areas as they assess, align, and refine existing curriculum using the Understanding by Design model. The guide will assist teams as they design relevant and engaging curriculum. We believe curriculum in South Milwaukee should encompass:

- Best practice and relevant research relating to their content area.
- Current national, state and local standards, including 21st century standards.
- Frequent, periodic, and trend-over-time curriculum and instruction revisions.

The strategic plan for the School District of South Milwaukee guides the district's continuous efforts to improve. The curriculum review and design process creates opportunities to enrich approaches to learning, teaching, and assessment as we strive to provide a guaranteed and viable universal curriculum to meet the needs of all students.

District Mission:

We, along with our community, commit to deliberate excellence for all learners by engaging and educating the whole person to succeed in our dynamic society.

District Vision:

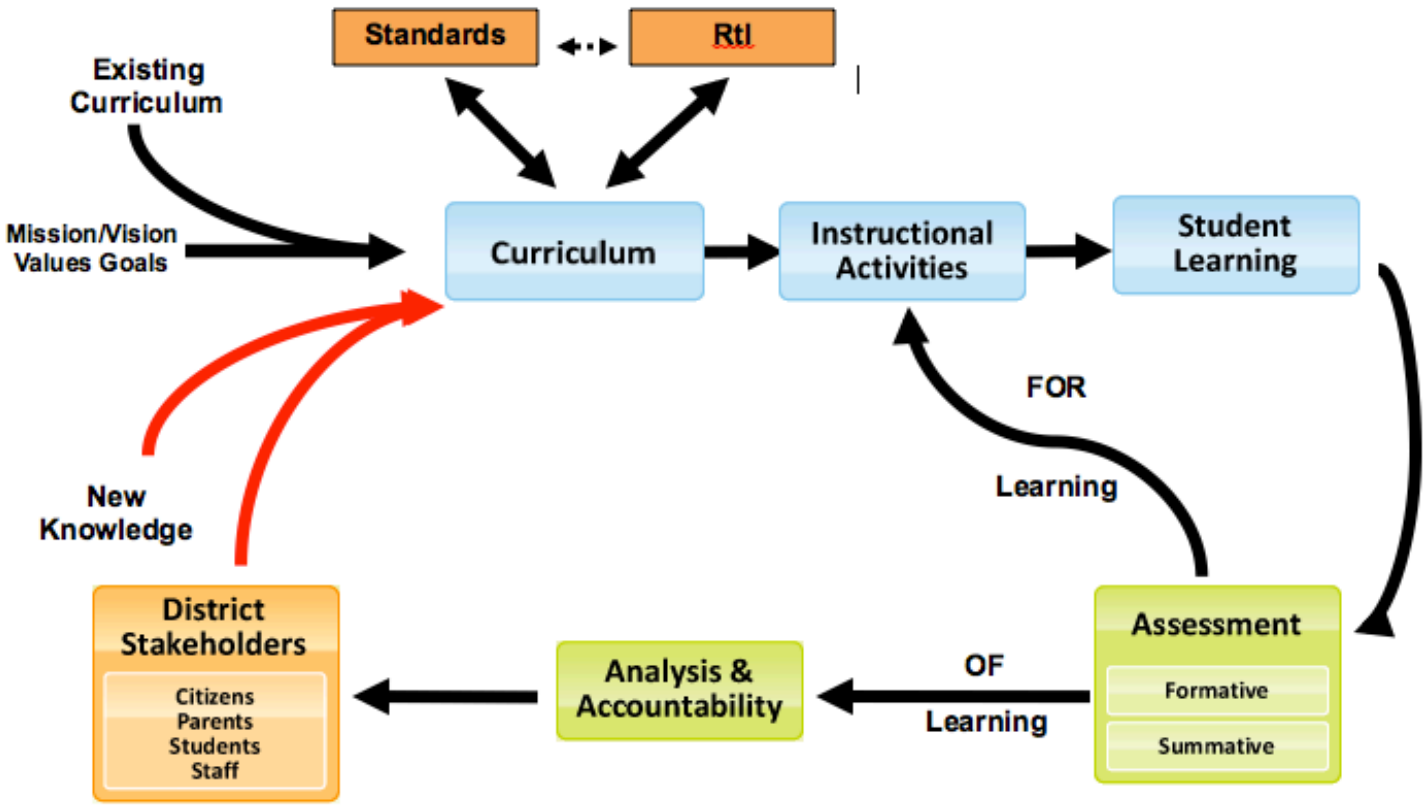
The vision of the School District of South Milwaukee is to create a dynamic environment where the world becomes the classroom so the classroom impacts the world.

District Academic Goal and Strategies

Goal 1: We will create deliberately excellent teaching and learning environment through academic rigor, attention to 21st century skills, and character development.

- Strategy 1: By December 2013 we will assess, align, implement, strengthen, and refine our universal curriculum as measured by qualitative and quantitative data.
- Strategy 2: By December 2013 we will assess, align, implement, strengthen, and refine our instructional practice and strategies as measured by research-based practices and Common Core State Standards.
- Strategy 3: During the 2010-2014 school years, we will systematically monitor student achievement data using district/state/national assessments so that each student masters or exceeds specific learning targets as defined by our universal curriculum.

Curriculum and Assessment Cycle



Created by Jim Hendrickson, adapted from BYOC Training materials, 2011

Understanding By Design (UbD) – Grant Wiggins and Jay McTighe

Understanding by Design, or "backwards design," is a framework for planning curriculum, instruction, and assessment to improve student achievement. UbD requires a strong alignment among big ideas, skills and knowledge; essential questions; classroom activities and assessment.

The School District of South Milwaukee has chosen to follow a UbD model of curriculum development. This model stresses an in-depth study of content versus "coverage" of content, which is neither transferred to new situations nor even retained by learners. Curriculum designed with the UbD process is one factor in ensuring high student achievement.

The Big Ideas of Understanding by Design
(*www.grantwiggins.org/documents/UbDQuikvue1005.pdf*)

1. UbD is a way of thinking purposefully about curricular planning and school reform, a set of helpful design tools, and design standards -- not a program or recipe.
2. The end goal of UbD is understanding and the ability to transfer learnings – to appropriately connect, make sense of, and use discrete knowledge and skills in context.
3. Evidence of understanding is revealed through performance – when learners transfer knowledge and skills effectively, using one or more "facets" (explain, interpret, apply, shift perspective, empathize, and self-assess).
4. Educators are coaches of understanding, not mere purveyors of content or activity.
5. Planning is best done "backward" from the desired results and the transfer tasks that embody the goals.
6. UbD transforms Content Standards and other goals into focused learning targets based on "big ideas" and transfer tasks.
7. Design Standards guide self-assessment and peer reviews of curriculum, instruction, and assessment for quality control.
8. UbD reflects a "continuous improvement" approach to design and learning. The results of our curriculum designs (e.g., assessment results, quality of student work, degree of learner engagement) inform needed adjustments.

Linking UBD Vocabulary to BYOC

The School District of South Milwaukee has chosen to use the Build Your Own Curriculum tool as the structure to organize and share our district wide curriculum. The BYOC tool has been formatted to allow us to develop our curriculum to the UbD model. Below is a glossary of terms to better understand how the UbD concepts align with the format of the BYOC tool.

UBD Vocabulary - Course Level

Course Description: A short paragraph of what students will be learning in the course.

> *This Social Studies course for grade five presents the story of the development of the United States of America, with emphasis on the period up to 1787, starting with the study of early Native Americans through the study of the three branches of government. This course focuses on the creation of a new nation, peopled by immigrants from all parts of the globe and governed by institutions founded on Judeo-Christian heritage. Five additional major units of study: Tools of History and Geography, Explorers, Colonial Period, Revolutionary Era, and early United States government round out the study for our fifth graders. Students will explore these units through the study of non-fiction texts, historical fiction, multi-media presentations, simulations, drama and current events.*

Enduring Understandings*:* understandings are STATEMENTS that reflect the big ideas that students will take away and keep forever (transcends cultures / times). Enduring understandings are a tool primarily **for the instructor** to focus instruction. They include important generalizations, principles, and theories. To determine the enduring understandings, consider completing this statement: By the end of this course, students will understand **THAT**…

> *A balanced diet contributes to physical and mental health.*
>
> *Perception is reality*
>
> *All living things have needs and must depend on and interact with resources in their environment in order to survived.*
>
> *Mathematics allows us to see patterns that might have remained unseen.*

Essential Questions: Restate the course understandings as questions. The purpose of this step is to provide **a tool for students.** Questions will capture their interest and focus their attention on the big ideas that will be explored in the course. The answers to these questions lead students to the enduring understandings of the course.

> *What is healthful eating?*
>
> *How does perception affect reality?*
>
> *How do livings thing interact with their environments in order to survive?*
>
> *How are patterns a part of mathematics?*

Materials and Resources: List any items, such as textbooks, calculators, notebooks, writing utensils, etc., that *students* will need for the course.

Pre-requisites: List any courses that must be successfully completed prior to this course.

Course Attachments: Course attachments may include syllabus, classroom expectations, materials list, etc.

UBD Vocabulary - Unit Level

Unit Description – A short paragraph of what students will be learning in this unit. Begin with "In this unit, students will _____" and continue with a brief overview of the unit's content. This description should be in "parent-friendly" and "student-friendly" language.

> *In this unit, students will understand that global and world history has greatly affected immigration to the United States. The United States is a "melting pot" as reflected by the diversity of today's students.*

Topics: Name each topic that will be covered in the unit.

> *Ellis Island*
>
> *Immigration Procedures*
>
> *Irish Potato Famine*
>
> *Important Immigrants and Contributions to United States Culture*
>
> *Obstacles and Risks Faced by Immigrants*

Unit Understandings: The unit understandings are STATEMENTS that reflect the big ideas that students will take away and keep forever from the unit. Unit understandings are a tool primarily **for the instructor** to focus instruction. They include important generalizations, principles, and theories. To determine the unit understandings, consider completing this statement: By the end of this unit, students will understand **THAT**…

> *People emigrate for various reasons.*
>
> *Receiving countries need to develop policies, procedures, and quotas to support an influx of people.*
>
> *A culture becomes richer through the talents of its immigrants.*

Unit Questions: *Restate the unit understandings as questions. The purpose of this step is to provide* ***a tool for students****. Questions will capture their interests and focus their attention on the big ideas that will be explored in the unit. The answers to these questions lead students to the enduring understandings of the course.*

> *Why do people emigrate?*
>
> *How do nations handle large influxes of immigrants? Has this changed over time?*
>
> *What are the benefits and challenges in a diverse culture?*

Materials and Resources: List any items, such as textbooks, manipulatives, etc., that *instructor* will need to prepare for the unit.

Common Assessments: *These are* selected "non-negotiable" evidence-based activities/ assessments that as a district, we have determined and agreed that can be used to measure the students' proficiency of the unit learning targets.

Unit Attachments: Unit attachments may include assessments, activities, prompts, websites, worksheets, projects, rubrics, timelines, etc.

Unit Comments: *This field is reserved for comments for future development.*

UBD Vocabulary - Topic Level

Topic Description: A short paragraph of what students will be learning in this topic.

In this topic (Ellis Island) students will learn about the creation of Ellis Island, its years of operation, operational procedures on Ellis Island, and it's role in the formation of the immigration policies of the United States.

Activities*:* Instructional experiences students engage in to develop an understanding of the topic(s). Activities will be tied to one or more of the learning targets.

Family tree research project

Video: Ellis Island Documentary

Immigration Journal

Attachments: Topic attachments may include assessments, activities, prompts, websites, worksheets, projects, rubrics, timelines, etc.

UBD Vocabulary - Learning Target Level

Learning Target Description: A very specific statement of what you want a student to know (knowledge) or be able to do (skills). Learning targets should begin with verbs, align with one or more of the state standards of your subject area, and are measured.

Read, write, and order whole numbers from 1-100.

Name and describe the three branches of the U.S. government.

Correctly use a balance to measure mass.

Develop and implement a plan that promotes personal health and wellness.

Take notes.

Interpret maps, graphs and charts.

Assessment: The technique used to analyze student accomplishments against specific goals and criteria. Assessments are used to determine whether or not students have mastered the learning targets of a unit of study. When entering assessments, include not only the type of assessment used to measure mastery of the learning target, but, where applicable, name the assessment

Chapter One Test: Scientific Inquiry

Quadrilaterals Quiz

Greek Myth Presentations

An Enduring Understanding . . . (U)

(description)

Involves the Big Ideas that give meaning and importance to facts.

Enduring understandings are made up of the concepts, principles, and theories that weave many facts into revealing and useful patterns. They involve the (few) organizing priority ideas that enable us to make sense of past lessons, conduct current inquiry, and create new knowledge.

Can transfer to other topics, fields, and adult life.

Such understandings endure in that they enable us to make vital and informative connections in our learning—as students and as adults. For example, the idea that "might does not make right" applies to both playground disputes and international diplomacy.

Is usually not obvious, often counterintuitive, and easily misunderstood.

An understanding is an inference, not a fact. It is an insight derived from inquiry. Key understandings in intellectual fields (e.g., in physics: *Objects remain in motion at a constant velocity if no force acts on them*) often violate common sense and conventional wisdom. They are thus often prone to misunderstanding by students. These understandings therefore cannot be covered; they must be uncovered.

May provide a conceptual foundation for basic skills.

Though skill-based teaching in mathematics, foreign language, and physical education does not seem to deal with "understandings" in most units, all skills derive their value from the strategic principles that help us know when and how to use the skill. The understandings also justify the use of a skill (e.g., the student who can explain why you should use a bent-arm pull in swimming freestyle) and enable the student to extend the use of the skill to new situations (e.g., the use of bent-arm pull in backstroke).

Is deliberately framed as a generalization—the "moral of the story."

An understanding is a generalization derived from inquiry. It is the specific insight that should be inferred from study of the topic (not just the stating of the topic)—what we want the student leaving the study to realize. Note: The enduring understanding of a unit might be that there is no single agreed-upon understanding, or that people disagree about how the issues, facts, text should be understood.

Tips on Framing Understandings

U

Frame the desired understanding as a full-sentence generalization in response to the phrase, "Students will understand that . . ."

State *specifically* what about the topic students are expected to grasp. Many curricular frameworks, content standards documents, and teacher objectives make the mistake of framing understandings as a topic (e.g., *students will understand the water cycle*) or skill (e.g., *students will understand how to multiply*).

We recommend that you summarize the *particular* understandings you are after, being as specific as possible about the insights that should result from exploring the topic (e.g., *data analysis and graphic displays often reveal helpful patterns and enable prediction*).

A practical way to accomplish this is to frame the understandings in response to the stem: "students will understand that . . ." (e.g., *the Civil War was fought initially over states' rights issues and regional economic politics, not just the morality of slavery*). This approach helps to clarify the desired generalizations that we want students to come to understand, while avoiding the problems of stating the understanding in terms of a topic or skill.

Another way to think about it: If your unit topic is a "story," then what is the moral of your story? By stating the understanding as a "moral of the story," designers move beyond topics to clarify the complete understanding they seek. For example, a moral in a unit on animal adaptation is *Living organisms have developed adaptive mechanisms to enable them to survive harsh or changing environments.*

Beware of stating an understanding as a truism or vague generality.

Avoid truisms. Truisms are statements that are true by definition (e.g., *triangles have three sides*) or state the obvious (e.g., *musicians work with sounds to create music*). Likewise, vague generalities (e.g., *the United States is a complex country* or *writing involves many different elements*) are too global to provide useful and transferable insights into important ideas. A practical tip: Check to see that your stated understandings do not end in an adjective (e.g., *fractions are important*).

Avoid the phrase, "Students will understand how to . . ."

Such a statement is ambiguous. One meaning is that the student will develop certain skills. This kind of objective is best placed in Box S (Skill) on the design template. Another meaning of "understand how" implies that there are insights essential to wise use of the skill—e.g., knowing *why* something works or is useful. Those desired insights should be made explicit and framed as understand-ings in Box U of the template.

A practical way to accomplish this is to specify "why?" "how?" "when?" and "so what?" when identifying desired understandings in skill areas.

Essential Questions

(description)

Have no simple "right" answer; they are meant to be argued.

Essential Questions yield inquiry and argument—a variety of plausible (and arguable) responses, not straightforward facts that end the matter. They serve as doorways into focused yet lively inquiry and research. They should *uncover* rather than cover the subject's controversies, puzzles, and perspectives. They are intended to result in conclusions drawn by the learner, not recited facts. For example, Does art reflect culture or help shape it? Can we look but not see? Why do "seers" see what the rest of us don't? Does the artist see more clearly or look elsewhere?

Are designed to provoke and sustain student inquiry, while focusing learning and final performances.

Essential Questions work best when they are designed and edited to be thought provoking to students, engaging them in sustained, focused inquiries that culminate in important performance. Such questions often involve the counterintuitive, the visceral, the whimsical, the controversial, the provocative. For example, Is the Internet dangerous for kids? Are censorship and democracy compatible? Does food that is good for you have to taste bad? Why write? Students develop and deepen their understanding of important ideas as they explore these questions.

Often address the conceptual or philosophical foundations of a discipline.

Essential Questions reflect the most historically important issues, problems, and debates in a field of study. For example, Is history inevitably biased? What is a proof? Nature or nurture? By examining such questions, students are engaged in thinking like an expert.

Raise other important questions.

Thought-provoking Essential Questions are naturally generative. They lead to other important questions within, and sometimes across, subject boundaries. For example, In nature, do only the strong survive? leads to What do we mean by "strong"? Are insects strong (since they are survivors)? What does it mean to be psychologically strong? Inquiries into human biology and the physics of physiology also follow.

Naturally and appropriately recur.

The same important questions are asked and asked again throughout one's learning and in the history of the field. For example, What makes a great book great? Are the Harry Potter novels great books? These questions can be productively examined and reexamined by 1st graders as well as college students. Over time, student responses become more sophisticated, nuanced, well-reasoned and supported as their understandings deepen.

Stimulate vital, ongoing rethinking of big ideas, assumptions, and prior lessons.

Essential questions challenge our unexamined assumptions, the inevitable simplification of our earlier learning, and the arguments we may unthinkingly take for granted. They force us to ask deep questions about the nature, origin, and extent of our understanding. For example, In light of fractions, place value, irrationals, and negative square roots—what is a number? Is it "democratic" to have an electoral college? What IS a friend? Can the enemy of my enemy be my friend? What is a story, if a story has no clear plot or moral? Is history more of a story than a science? What are the implications for studying history, if so?

Types of Questions

Overarching Questions

These questions point beyond the particulars of a unit to the larger, transferable Big Ideas and enduring understandings. Practically speaking, the specific topics, events, or texts of the unit are typically not mentioned in the framing of overarching questions. For example, Is science fiction great literature? is an overarching question for any unit on a specific text such as *Stranger in a Strange Land.*

Topical Questions

These questions are subject- and topic-specific. Topical questions frame a unit of study. They guide the exploration of Big Ideas and processes within particular subjects. For example, What aspects of *Stranger in a Strange Land* are plausible? guides inquiry within a specific literature unit. This unit question links to the overarching question, How "true" is a fictional story? This question is addressed within other English and Language Arts units.

Samples

Art

- In what ways does art reflect culture as well as shape it?
- How do artists choose tools, techniques, and materials to express their ideas?

Unit on masks

- What do masks and their use reveal about the culture?
- What tools, techniques, and materials are used in creating masks from different cultures?

Literature

- What makes a great story?
- How do effective writers hook and hold their readers?

Unit on mysteries

- What is unique about the mystery genre?
- How do great mystery writers hook and hold their readers?

Science

- How does an organism's structure enable it to survive in its environment?
- How do organisms survive in harsh or changing environments?

Unit on insects

- How do the structure and behavior of insects enable them to survive?
- How do insects survive when their environment changes?

Mathematics

- If axioms are like the rules of the game, when should we change the rules?

Unit on the parallel postulate

- Why is this an axiom if it's so complex?
- What no longer holds true if we deny it?

History and Government

- How do governments balance the rights of individuals with the common good?
- How and why do we provide checks and balances on government power?

Unit on the U.S. Constitution

- In what ways does the Constitution attempt to limit abuse of government powers?
- Does separation of powers (three branches of government) create a deadlock?

Tips for Using Essential Questions

1. Organize programs, courses, units of study, and lessons around the questions. Make the "content" answer the questions.

2. Select or design assessment tasks (up front) that are explicitly linked to the questions. The tasks and performance standards should clarify what acceptable pursuit of, and answers to, the questions actually looks like.

3. Use a reasonable number of questions per unit (two to five). Make less be more. Prioritize content for students to make the work clearly focus on a few key questions.

4. Frame the questions in "kid language" as needed to make them more accessible. Edit the questions to make them as engaging and provocative as possible for the age group.

5. Ensure that every student understands the questions and sees their value. Conduct a survey or informal check, as necessary, to ensure this understanding and recognition.

6. Derive and design specific concrete exploratory activities and inquiries for each question.

7. Sequence the questions so that they naturally lead from one to another.

8. Post the essential questions in the classroom and encourage students to organize notebooks around them to make clear their importance for study and note taking.

9. Help students to personalize the questions. Have them share examples, personal stories, and hunches. Encourage them to bring in clippings and artifacts to help make the questions come alive.

10. Allot sufficient time for "unpacking" the questions—examining subquestions and probing implications—mindful of student age, experience, and other instructional obligations. Use question and concept maps to show relatedness of questions.

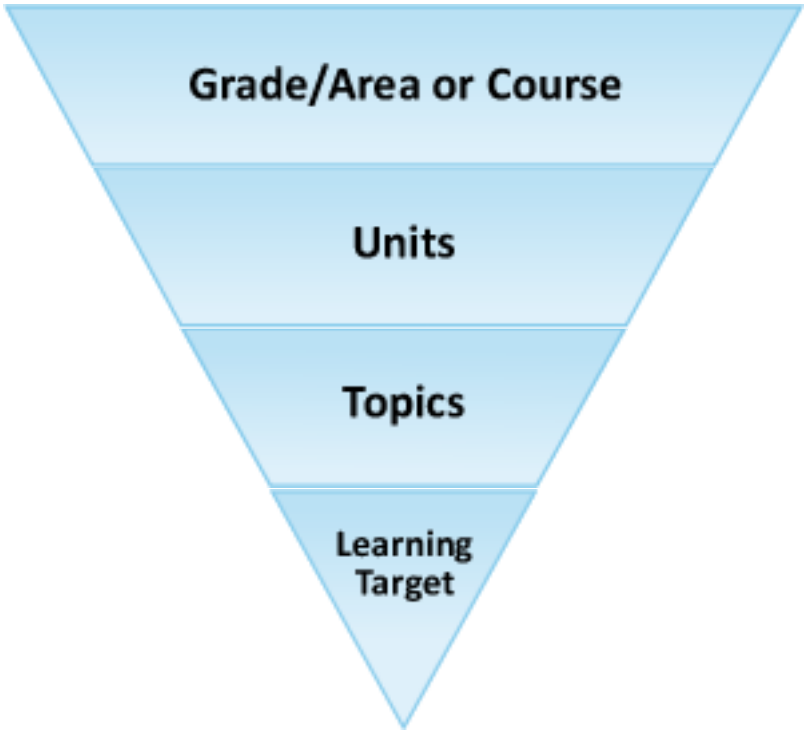
11. Share your questions with other faculty to make planning and teaching for cross-subject matter coherence more likely. Encourage ideas to promote overarching questions schoolwide—ask teachers to post their questions in the faculty room and in department meeting and planning areas. Type and circulate questions in the faculty bulletin. Present and discuss questions at faculty and P.T.S.A. meetings.

Other tips:

Build Your Own Curriculum

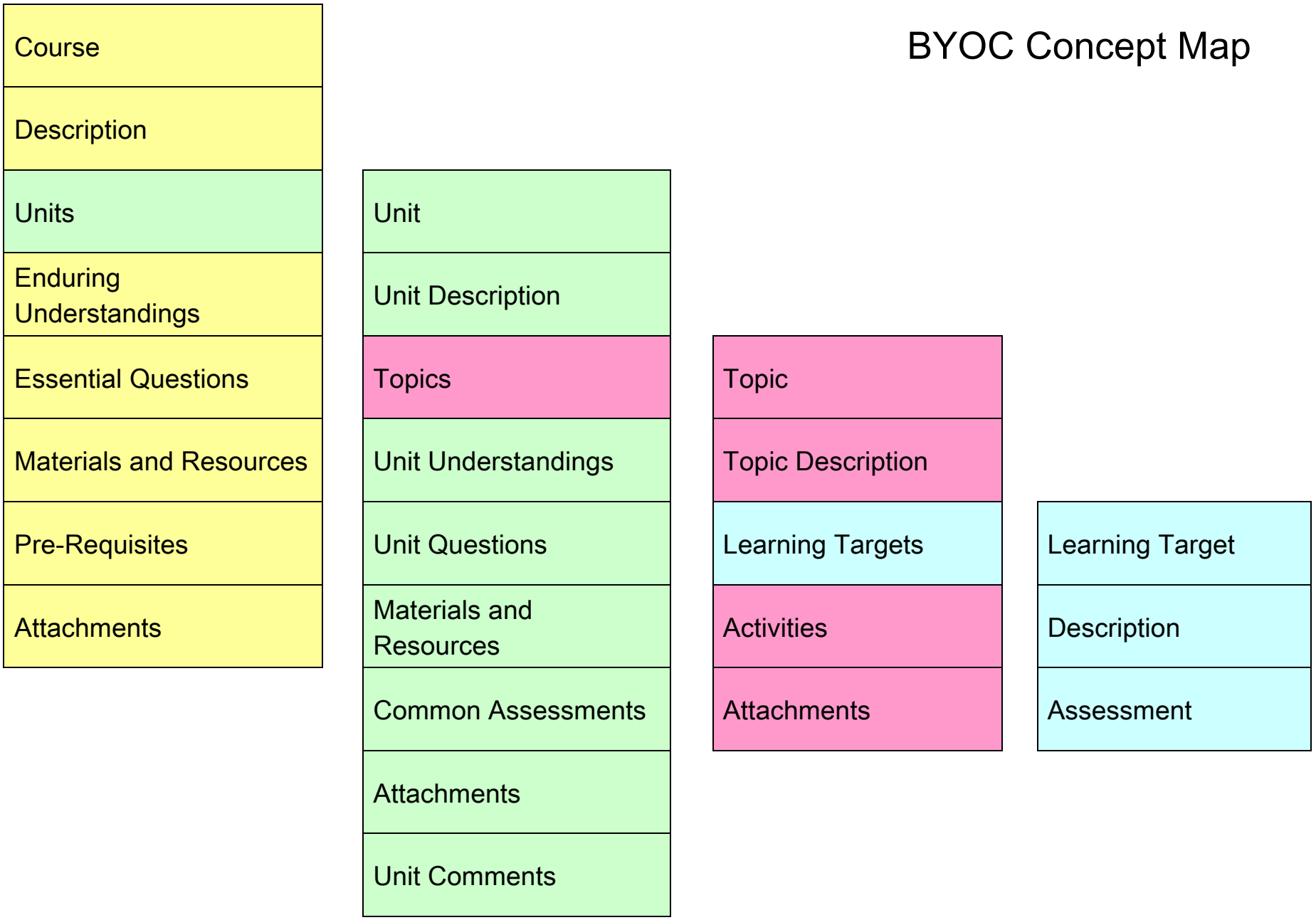
Build Your Own Curriculum is an online curriculum management tool. BYOC allows content areas to organize their curriculum work around the UbD framework. Once curriculum is entered and approved, course information can be shared with parents, students as well as other teachers. The graphic below identifies how BYOC is organized:

District Curriculum



Within each portion of the graphic above, information will be identified which will create a structured framework for each course, clearly linking each area (see figure below).

BYOC Concept Map



Step One: Name the unit

Units will need to be named; e.g., "Unit 1" will not be sufficient; instead be more specific – e.g., "Unit 1: Number Sense" so that readers such as parents will have a greater understanding of what Unit 1 is all about.

Step Two: Estimate the time frame of the unit

Estimate the duration of each topic according to days to give you an overall time frame for the unit. Use the drop down menu to select the number of days.

Time Frame	Day(s)

Step Three: Describe the unit

Begin with "In this unit, students will _____" and continue with a brief overview of the unit's content. This description should be in "parent-friendly" and "student-friendly" language.

☐ Have you provided a general summary of the unit's content?

Step Four: Unit Understandings

The unit understandings are STATEMENTS that reflect the big ideas that students will take away and keep forever from the unit. Unit understandings are a tool primarily **for the instructor** to focus instruction. They include important generalizations, principles, and theories. To determine the unit understandings, consider completing this statement: By the end of this unit, students will understand **THAT**…

Use this space to write down your unit understandings.

1.

2.

3.

4.

5.

☐ Have you clearly stated the big ideas that students will understand at the conclusion of the unit?

Step Five: Unit Questions

Restate the unit understandings as questions. The purpose of this step is to provide **a tool for students.** Questions will capture their interest and focus their attention on the big ideas that will be explored in the unit. The answers to these questions lead students to the enduring understandings of the course.

1.

2.

3.

4.

5.

☐ Do your unit questions lead the students to the enduring understandings of the course?

Step Six: Academic Vocabulary

In this section, list the **specific vocabulary** terms that will be learned during the course of this unit.

Step Seven: Common Assessments

In this section, name and describe the common assessments used to measure students' proficiency of the unit learning targets.

☐ Have you clearly described how students' skills, knowledge, and understandings will be assessed in this unit?

Step Eight: Materials and Resources

In this section, list materials and resources that you use as an instructor to teach the content of this unit, including textbook chapters, supplemental readings, manipulatives, labs equipment, etc.

Step Nine: Name each topic that is covered in the unit.

1.
2.
3.
4.
5.
6.
7.
8.

Step Ten: Assign Learning Targets to each topic and connect them to state standards.

The Learning Targets reflect the **specific pieces of knowledge** and the **specific skills** students will gain throughout the course of this unit. Learning Targets are **measurable** and are **directly linked to standards and assessments**.

Curriculum Development Resource Page

Common Core State Standards for Mathematics - http://corestandards.org/the-standards/mathematics

Common Core State Standards for ELA - http://corestandards.org/the-standards/english-language-arts-standards

Wisconsin State Standard - http://dpi.wi.gov/standards/index.html

ACT College Readiness Standards (EXPLORE, PLAN, & ACT) http://www.act.org/standard/

Understanding by Design - http://www.authenticeducation.org/ubd/ubd.lasso

Build Your Own Curriculum (Admin Site) - http://admin.buildyourowncurriculum.com/Admin/Login.aspx

Build Your Own Curriculum (Public Site) - http://sdsm.buildyourowncurriculum.com/public/course_search.asp